

Facing Ubiquitous Viruses: When Hand Washing Is Not Enough

TO THE EDITOR—Educating the public on the most effective ways to avoid contamination during severe pandemics and other public health emergencies is critical for lowering the transmission rate and impact of infectious diseases. The widespread recommendation of frequent hand washing to prevent an influenza infection is based on the assumption that individuals can self-inoculate with viruses when touching their mouth, nose, or eyes with their hands, which could be contaminated if common surfaces were also touched previously. Indeed, as many may remember, the advice most strongly stressed by government officials and authorities during the 2009 pandemic was to wash hands frequently.

Although there is no doubt about the importance of hand hygiene in public health and healthcare settings, we question its effectiveness at preventing self-inoculation with respiratory viruses in most contexts where human interactions of epidemic relevance take place. During 66.2 hours of focal observation of 249 randomly selected individuals in public spaces in the city of Florianopolis,

Brazil, and in the subway of Washington, D.C., we found that individuals touched common surfaces and their mouth/nose mucosa at a rate of 3.3 and 3.6 touches per hour, respectively, indicating that the opportunities for hand recontamination in public settings occur at a much higher rate than any viable hand-washing frequency. We therefore suggest a shift in the focus of the recommendations issued during outbreaks toward ensuring that individuals understand how self-inoculation occurs and thus avoid touching their faces (at least until ensuring their hands are properly sanitized). Although built on the influenza pandemic experience, this suggestion should be equally relevant for other respiratory pathogens that can be the source of severe outbreaks.

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**Wladimir J. Alonso,¹ Francielle C. Nascimento,²
Joseph Shapiro,³ and Cynthia Schuck-Paim²**

¹Fogarty International Center, National Institutes of Health, Bethesda, Maryland; ²Origem Scientific, Sao Paulo, Brazil; and ³George Washington University School of Medicine and Health Sciences, Washington, DC

Correspondence: Wladimir J. Alonso, PhD, Fogarty International Center, National Institutes of Health, 16 Center Drive, Bldg 16, Bethesda, MD 20892 (alonsovw@mail.nih.gov).

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